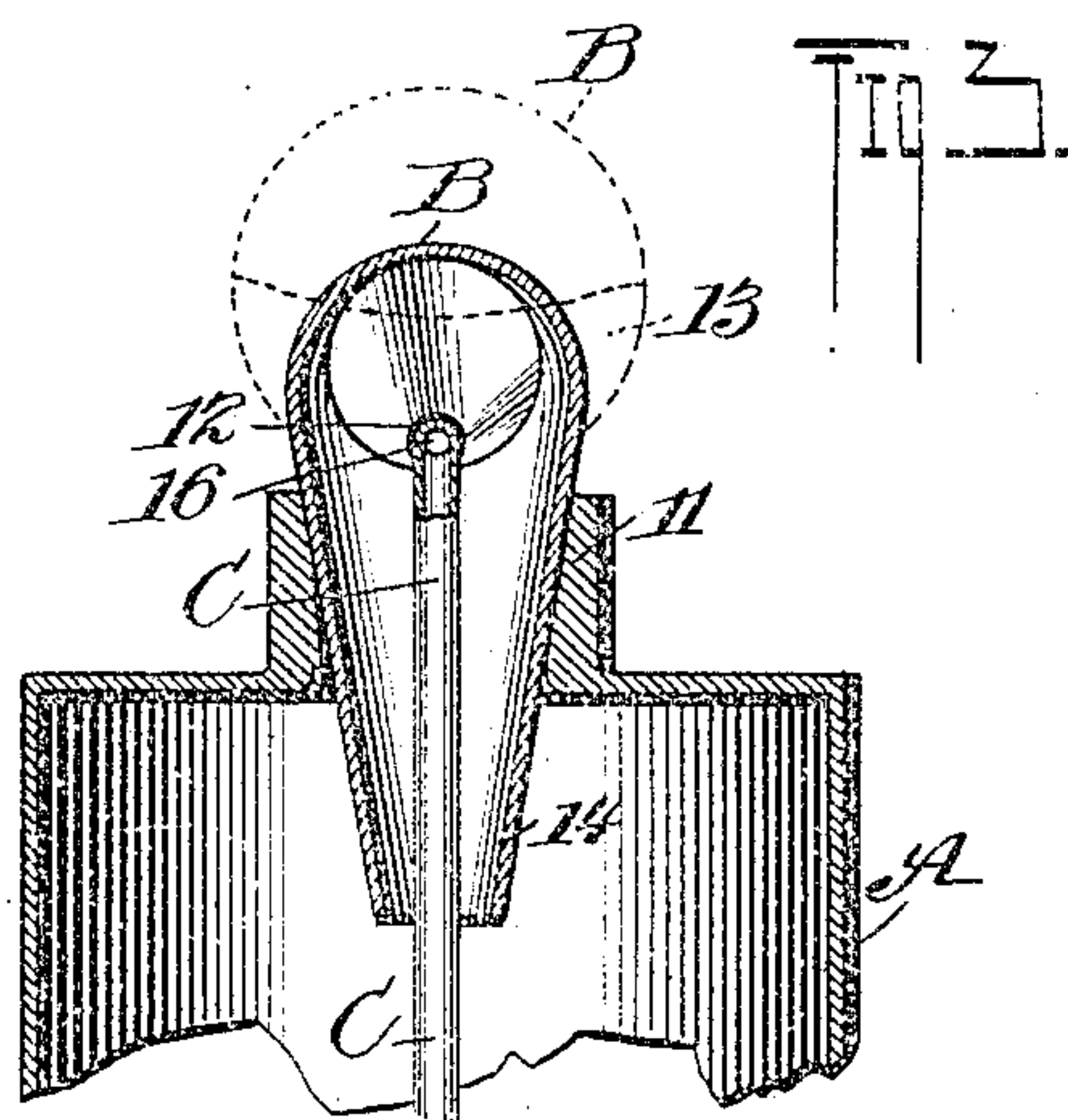
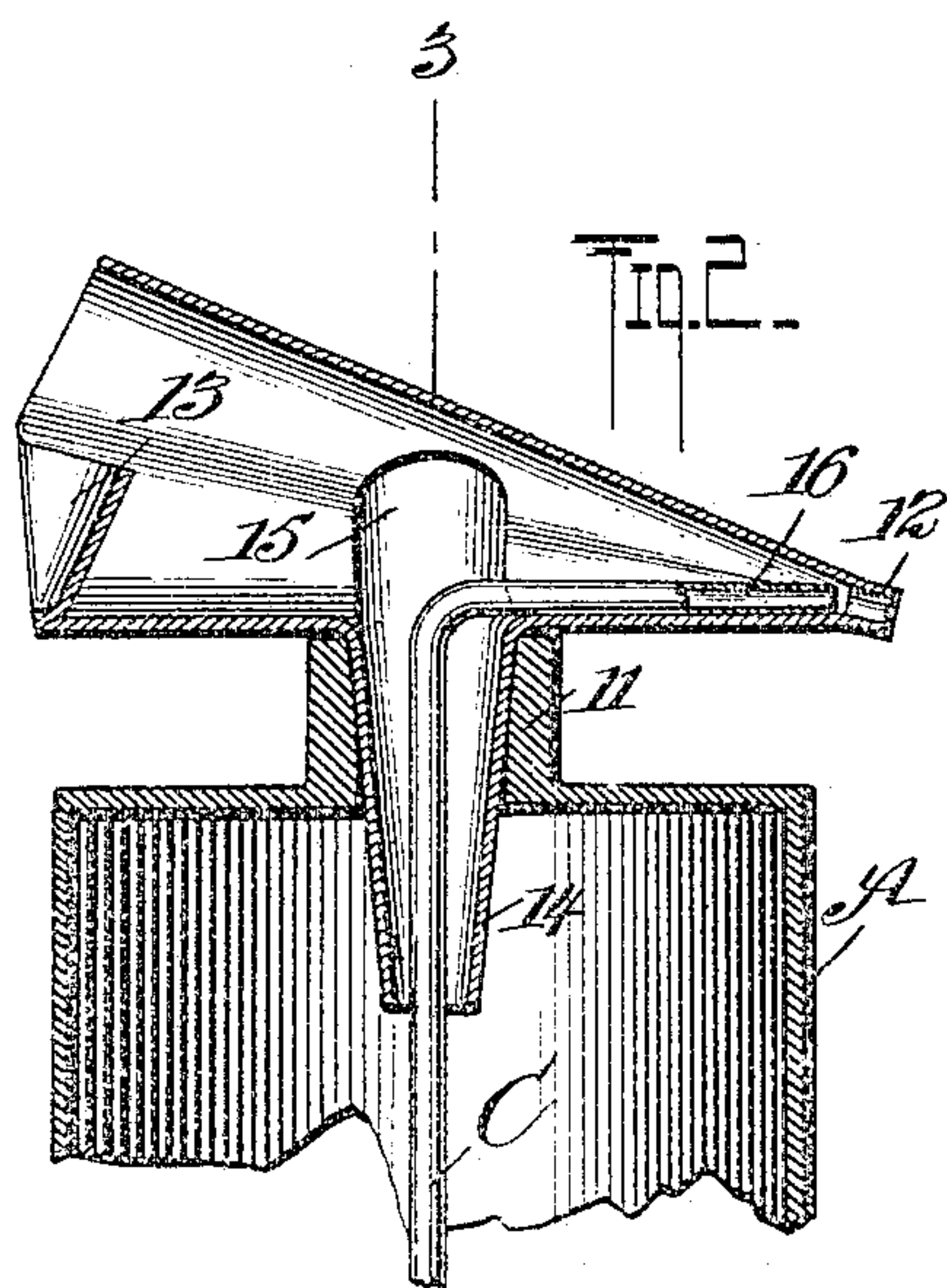
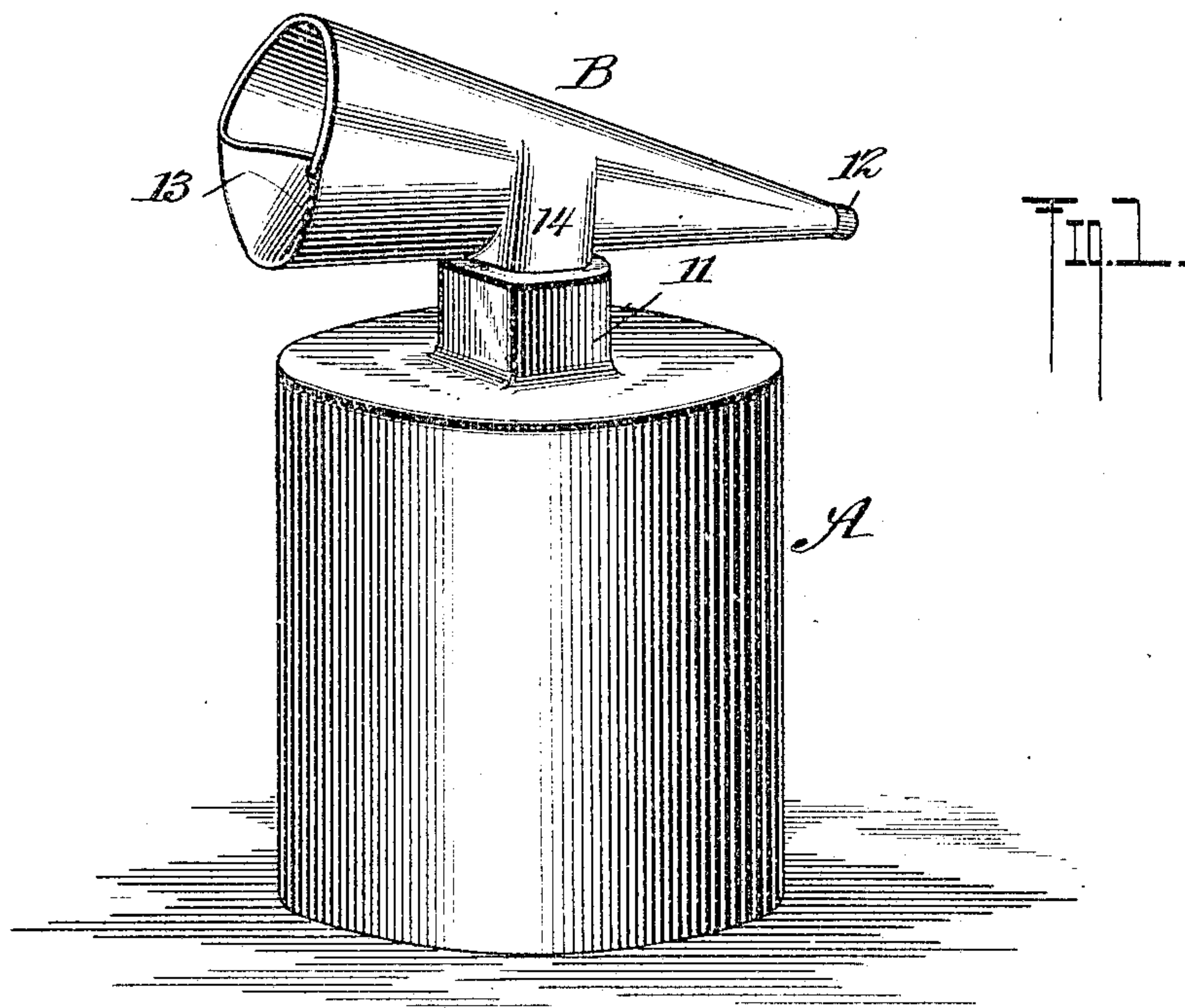


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M. F. HAVENS.
SPRAYER FOR THE WOUNDS OF ANIMALS.

APPLICATION FILED JULY 25, 1904.



WITNESSES:

Geo. C. Kingdum
Geo. C. Kingdum

INVENTOR ·

Mary F. Havens.

BY

Munn & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

MARY F. HAVENS, OF NEW YORK, N. Y.

SPRAYER FOR THE WOUNDS OF ANIMALS.

SPECIFICATION forming part of Letters Patent No. 787,174, dated April 11, 1905.

Application filed July 25, 1904. Serial No. 218,025.

To all whom it may concern:

Be it known that I, MARY F. HAVENS, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Sprayer for the Wounds of Animals, of which the following is a full, clear, and exact description.

The purpose of my invention is to provide a device for spraying heavy oils, ointments, and emulsions upon the wounds of cattle, horses, and all animals without causing the wounds to bleed or to be unduly irritated and without frightening the animal under treatment.

A further purpose of the invention is to provide a spraying device of the character described which may be operated by the mouth of the operator without danger of any of the liquid blown to the outlet of the sprayer returning to the end of the device to which the lips are applied, a double guard being provided for such purpose, as frequently the material employed is of a poisonous nature, and when the device is used in an upwardly-inclined position the material is sure to flow back to the mouth, especially if benzin is used, unless such guard is provided.

A further purpose of the invention is to provide a spraying device for the purpose mentioned which will be simple, durable, and economic in construction and to which a force-pump of any description may be applied, if desired, and to so locate the supply-pipe leading to the delivery end of the device that such pipe will automatically accommodate itself to all conditions of service.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improved device. Fig. 2 is a vertical section through the upper portion of the device, taken at the central portion thereof; and Fig. 3 is likewise a vertical central section taken at

right angles to the view shown in Fig. 2 and practically on the line 3 3 of Fig. 2.

The device is made of metal, copper being preferably employed, as rubber bulbs and tubes under all conditions of use in connection with a device of this character rapidly deteriorate and metal serves to hold emulsions or heavy oils employed in such condition that after having been heated the material can be readily sprayed.

A represents a receptacle of any desired shape, which is provided at its upper end with a collar 11, serving practically as a socket, and the inner contour of this socket-collar is polygonal.

B represents the body of the spraying device, which body is of conical shape, tapering from the end at which the forced air is to be applied in direction of the outlet end, but the outlet end 12 is more or less straight in order that the liquid shall not center in drops, but will be finely separated, and therefore easily directed wherever desired in the form of a spray. The liquid striking the wound in this form will not shock the animal to such an extent as to frighten it and can be readily borne, even though the wound be of a severe nature.

At the inlet end of the body B a shield 13 is formed, which is given an upward and forward inclination, said shield extending from the bottom of the body B and from the side portions thereof adjacent to the body. Furthermore, in the construction of the body a tapering tubular extension 14 is provided, which exteriorly is fitted to the polygonal shape of the interior of the socket-collar 11. This extension 14 is conical in shape, being contracted at its lower end, as is shown by Figs. 2 and 3, and in producing this tubular extension 14 opposing side walls of the said extension are continued up into the body B to a certain extent or to a point almost to the top of the body, as is shown in Fig. 2, producing thereby side chambers which may be designated as 15, together with the mouth-guard 13, effectually preventing any liquid passing back to the mouth of the person operating the device, as the guard 13 positively protects the lower portion or lower lip of the

mouth, while the chambers 15 serve to conduct any overflow of liquid down through the tubular extension 14 into the receptacle A.

In connection with the body B of the sprayer and the receptacle A a supply-tube C is employed. This supply-tube is of much less diameter than the diameter at the bottom of the extension 14, as is shown in Figs. 2 and 3, and the said tube C passes up through the extension 14 of the body B of the spraying device to practically a level with the bottom of the said body B and is carried as near as possible to the straight delivery end 12 of the said body, as is shown at Fig. 2, the lower end of the supply-tube being carried as close as possible to the bottom of the receptacle A. The supply-tube C is mounted to move from side to side or to take any lateral position necessary under the influence of the air introduced into the body B, and such action is automatic.

It will be understood that the supply-tube C passes down into the receptacle A as far as may be desired—as, for example, the lower end of the supply-tube C terminates as near as possible to the bottom of the receptacle A.

I desire it to be understood that while the device may be safely used by a person blowing into the body B, the air may be introduced into the said body by a force-pump of any suitable description.

It is evident from the description and the drawings that when air is introduced into the larger or rear end of the body B the liquid will be drawn up from the receptacle A by suction and pressure of air on top of the liquid and at the same time will be forced out through the delivery end of the supply-tube C and in more or less of a spray form through the nozzle 12 of the body B. The liquid under such conditions gently strikes the walls of a wound in the form of a spray and does not startle the animal as when delivered in force and in bulk—as, for example, when an ordinary syringe is employed.

The very large opening around the supply-tube C admits of a great pressure of air on the surface of the oil in the receptacle A, and this pressure, particularly in connection with the suction which may be induced, enables the operator to throw a spray of even ex-

ceedingly heavy oil a great distance through the medium of the breath of the operator or a suitable pump.

I desire it to be understood that while I have described the extension 14 of the body of the spraying device as polygonal it may be round or so shaped in cross-section that it can be fitted to the mouth of any ordinary vessel.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A spraying device for the wounds of animals, comprising a receptacle, a conical spraying-body mounted on the receptacle and having a conical extension projecting within the receptacle, and a supply-tube extending from within the receptacle into the body to the contracted end thereof, said supply-tube being movable in said body.

2. A spraying device for the wounds of animals, comprising a receptacle, a conical spraying-body mounted on the receptacle and having a straight delivery end portion, a conical projection within the receptacle, and a supply-tube extending from within the receptacle into the body to a point closely adjacent to the straight delivery portion of the body, as described.

3. In a device for spraying the wounds of animals, a receptacle, a sprayer comprising a body, an extension from the body and a supply-tube, the said body being of conical shape, having its contracted end in straight form, the extension from the body being also of conical shape and contracted at the bottom, the said body having opposing side recesses therein connecting with the said portions of the body and leading into the extension from the body, the said supply-tube being passed loosely through the extension from the body and through the body to its straight delivery end, the supply-tube being also removably placed in the body.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARY F. HAVENS.

Witnesses:

J. FRED. ACKER,
JNO. M. RITTER.